



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/852,102	05/09/2001	Evren Eryurek	R11.12-0749	5027

7590 02/19/2004

Judson K. Champlin
WESTMAN CHAMPLIN & KELLY
International Centre, Suite 1600
900 South Second Avenue
Minneapolis, MN 55402-3319

EXAMINER

WEST, JEFFREY R

ART UNIT PAPER NUMBER

2857

DATE MAILED: 02/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	Application No. 09/852,102	Applicant(s) ERYUREK ET AL.	
	Examiner Jeffrey R. West	Art Unit 2857	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 22 December 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
- b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☐ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: _____.

Claim(s) withdrawn from consideration: _____.

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____


MARC S. HOFF

SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Continuation of 5:

The Examiner first notes that Applicant indicates, "copies of the Office Actions dated October 19, 2001, April 10, 2002, November 5, 2002 and April 15, 2003 from [the 6,654,697] application are submitted herewith at Appendix A." The After Final Response received by the Examiner, however, did not include any Appendix with such documents.

Applicant argues that "Freeman is relied upon to show a 'moving average'. Applicant notes that Freeman is directed to detecting and controlling disturbances in the flow through a compressor. Flow sensors 102A and 102B shown in Figure 13 of Freeman are used to sense flow through the compressor. The average used by Freeman is for detecting variations in the flow. Freeman does not describe the use of impulse piping as set forth in the pending claims. Further, Freeman does not describe diagnosing impulse lines and/or a primary element. There is no suggestion that any of the teachings of Freeman could be applied to a diagnostic system and therefore the combination of Freeman and with Lowe is improper . . ."

The Examiner asserts that the invention Freeman is not included to teach the use of impulse piping or the diagnosis of impulse lines and/or a primary element. The invention of Lowe teaches obtaining a diagnostic result to indicate the blocked condition of impulse lines based on the condition of a flow device, such as a pump or orifice plate (Lowe, column 4, lines 35-43) for display to the user for diagnostic reporting (Lowe, column 5, lines 59-62). The invention of Freeman is only included to teach calculating a difference between current pressure data and a moving average of pressure data rather than a difference between current pressure data and an ideal threshold. Further, motivation exists for making such a combination because both Lowe and Freeman teach methods for determining significant deviation but Freeman suggests a method that would provide more accurate results by providing a steady but continuously updated base level against which the magnitude of the instantaneous variations can be measured (Freeman, column 10, lines 52-55).

Applicant also argues that "Lowe et al., in fact, teach away from using the rolling average technique of Freeman in a diagnostic configuration. Lowe specifically states that a variance is used. Further, Lowe specifically teaches the use of a threshold as opposed to a historical value."

First, the Examiner notes that the invention of Freeman also discloses a method for determining a variance above a predetermined variation limit to determine improper flow (column 2, lines 18-20). Second, the preferred method for determining the variance of Lowe does not teach away from the variance determination method in the invention of Freeman. One having ordinary skill in would recognize that a plurality of methods exist for determining variation, and the invention of Lowe provides no disclosure that would indicate that the method of Freeman would teach away.

Applicant then argues that "the Freeman reference does not show the use of a historical moving average in accordance with the claims. Instead, Lowe describes a, 'continuously updated base level against which the magnitude of instantaneous variations can be measured.' Thus, there is no 'training mode' as set forth in claims 1 and 28. Further, there is no step of, 'retrieving a baseline statistical parameter for a baseline primary element or impulse piping' as set forth in claim 29."

The Examiner asserts that the claimed invention provides the "moving average" calculation as a step separate from that of the "training mode". Claim 1, for example states, "a first algorithm calculating a difference between the pressure data and a moving average of the pressure data, and a second algorithm receiving the difference and calculating a trained data set of historical pressure data during a training mode". Further, as noted above, the invention of Freeman is only included to teach an improved method for determining variation using a moving average. The steps of obtaining a baseline parameter and implementing a "training mode" are taught by the invention of Shanahan.

Applicant then argues that "if the teachings of Shanahan are applied to Lowe and/or Freeman, the resulting device is simply the compressor controller of Freeman, or the variance/threshold level diagnostic technique of Lowe in which the calibration technique of Shanahan is provided to improve accuracy of the sensor output."

The Examiner asserts that one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The combination of Lowe in view of Freeman and Shanahan teaches the impulse line diagnostic system of Lowe with the improved method for determining significant deviation, taught by Freeman, and the method for determining accurate error, for elimination or indication, by using baseline data specific to the current system rather than desired values, as taught by Shanahan.